Time Management Update
AMG-18
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Summary of Activities

Meetings: 2/28/97 and 3/8/97

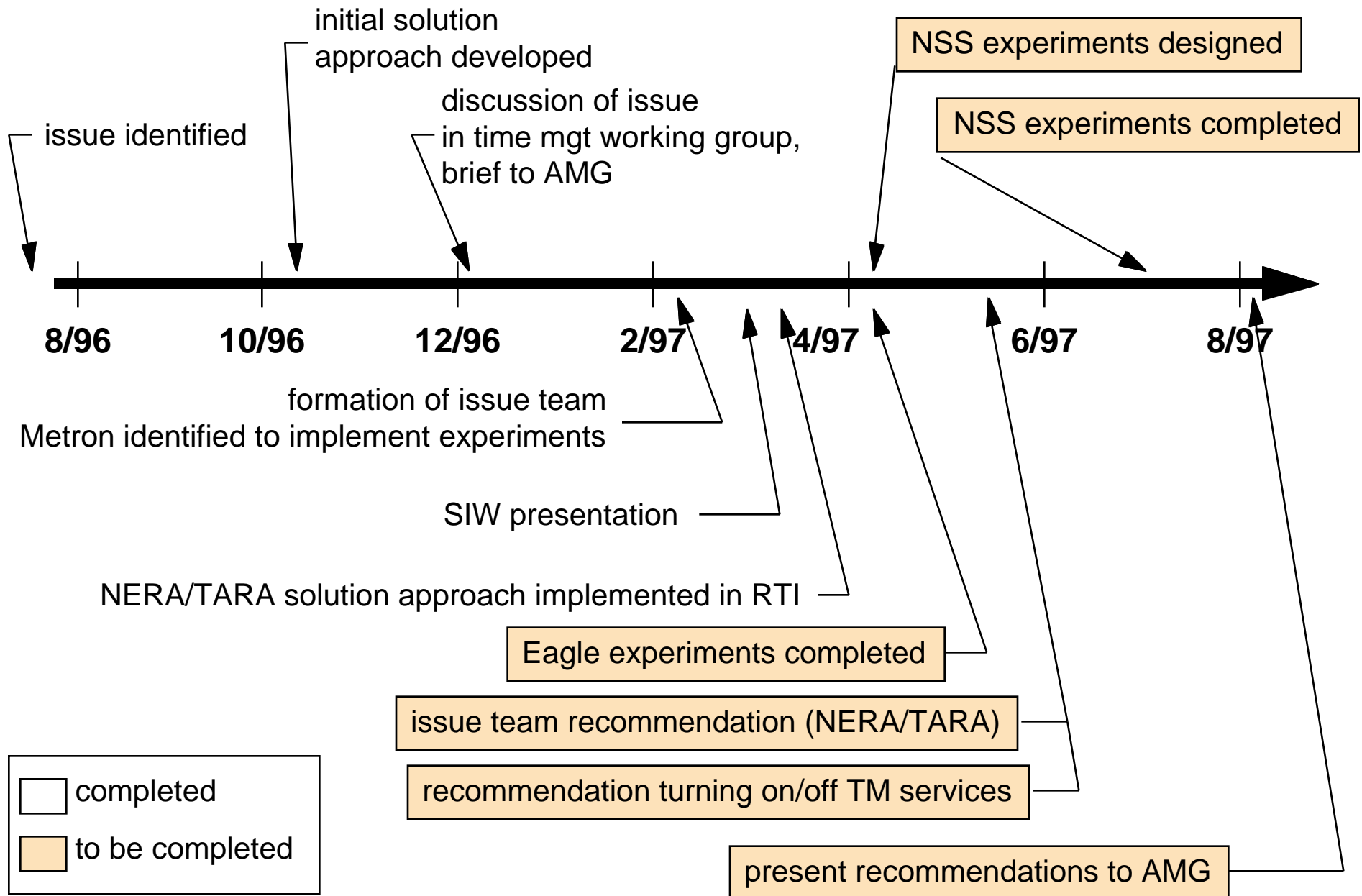zero lookahead, repeatability, ordering simultaneous events

- receiver orders simultaneous events (using NERA, TARA services)
  - need for "barrier" construct identified
  - demonstrated barriers can be implemented using proposed/ existing services
  - experiments using Eagle application in progress (Ogren)
  - expect recommendation at August '97 AMG meeting
- NSS: complex zero lookahead scenarios (cycles, unpredictable event behavior wrt scheduling zero lookahead events, etc.)
  - utility of additional capability to order simultaneous events identified
  - priorities identified as a possible solution to specifying order of simultaneous events; definition of logical time?
  - proposal to extend TM services to add priorities developed
  - experiment plan developed using NSS (Steinman)
  - resolution Fall '97

Summary of Activities (cont.)

enable/disable TM services during a federation execution

- regulating and constrained switches now in API, not an IFSpec service
  - proposal to add IFSpec services developed
  - set/reset regulating and constraining flags
  - anticipate recommendation for August '97 AMG meeting
- TM and security guards
  - proposed approach presented
  - issue under investigation

Zero Lookahead: Milestones

issue identified

initial solution approach developed

discussion of issue in time mgt working group, brief to AMG

NSS experiments designed

NSS experiments completed

8/96   10/96   12/96   2/97   4/97   6/97   8/97

formation of issue team
Metron identified to implement experiments

SIW presentation

NERA/TARA solution approach implemented in RTI

Eagle experiments completed

issue team recommendation (NERA/TARA)

recommendation turning on/off TM services

present recommendations to AMG

completed

to be completed

Turning On/Off Time Regulation
Time Regulation • enabled: the federate can send TSO messages, and information from federate is used in LBTS computation • disabled: any TSO messages sent by the federate are automatically changed to receive ordered; federate is not included in LBTS computation

New Services (IFSpec)
Enable Time Regulation (T, LA) • turn on time regulation, enabling federate to send TSO messages, as of logical time T (or greater); initialize federate's lookahead to LA Time Regulation Enabled (T')† • indicates time regulation has been enabled and the logical time of the federate is set to T' (T'   T)
Disable Time Regulation • disable time regulation (takes effect immediately)

Turning On/Off Time Constrained

Time Constrained

- enabled: the federate can receive TSO messages

- disabled: any TSO messages received by the federate are automatically changed to receive ordered

New Services (IFSpec)

Enable Time Constrained

- requests federate become time constrained (takes effect immediately)

Disable Time Constrained

- requests federate no longer be time constrained (takes effect immediately)